

CLAIMS

1. A pressure transducer, including:
- (A) a shell;
 - (B) a pressure sensor disposed in the shell;
 - (C) a heater attached to the shell, the heater including a first heating element and a second heating element, the first heating element being characterized by a first electrical resistance, the second heating element being characterized by a second electrical resistance, the first electrical resistance being different than the second electrical resistance.
2. A transducer according to claim 1, further including one or more electronic components for applying an electrical signal to the heater, the heater generating heat in response to the electrical signal.
3. A transducer according to claim 2, further including a connector for selectively connecting the first heating element in series with the one or more electronic components.
4. A transducer according to claim 2, further including a connector for selectively connecting the second heating element in series with the one or more electronic components.
5. A transducer according to claim 2, further including a connector for selectively connecting the first and second heating elements in series with the one or more electronic components.
6. A transducer according to claim 2, further including a connector for selectively connecting the first and second heating elements in parallel with the one or more electronic components.
7. A transducer according to claim 1, wherein the pressure sensor includes a flexible diaphragm.
8. A transducer according to claim 7, wherein the pressure sensor includes a conductor, the diaphragm and the conductor being characterized by a capacitance.
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9. A method of heating at least a portion of a pressure transducer, the method comprising applying an electrical signal to a first heater that provides a first electrical resistance and then applying an electrical signal to a second heater that provides a second electrical resistance.
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10. A method according to claim 9, wherein the first heater comprises a first heating element.

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11. A method according to claim 10, wherein the second heater comprises the first heating element and a second heating element, the first heating element being coupled to the second heating element.

12. A method according to claim 10, wherein the second heater comprises a second heating element.

13. A method according to claim 9, further including using the first and second heaters to apply heat to a heater shell.

14. A method according to claim 9, further including using the first and second heaters to apply heat to a pressure sensor.

15. A method of heating at least a portion of a pressure transducer, the method comprising:

(A) providing a heater including a first heating element and a second heating element, the first heating element being characterized by a first electrical resistance, the second heating element being characterized by a second electrical resistance, the first electrical resistance being different than the second electrical resistance;

(B) applying an electrical signal to the first heating element during a first period of time; and

(C) applying an electrical signal to the second heating element during a second period of time.

16. A method according to claim 15, wherein the second period of time follows the first period of time.

17. A method according to claim 15, including applying an electrical signal to the first heating element during the second period of time.

18. A pressure transducer, including:

(A) a shell;

(B) a pressure sensor disposed in the shell;

(C) a heater attached to the shell, the heater including a first heating element and a second heating element, the first heating element being characterized by a first electrical resistance, the second heating element being characterized by a second electrical resistance;

(D) one or more electronic components for applying an electrical signal to the heater, the heater generating heat in response to the electrical signal;

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(E) a switching element for selectively connecting (1) the first and second heating elements in series with the electronic components and (2) the first heating element in series with the electric components, the second heating element in series with the electronic components, or the first and second heating elements in parallel with the electronic components.

19. A transducer according to claim 18, wherein the first electrical resistance is equal to the second electrical resistance.

20. A transducer according to claim 18, wherein the first electrical resistance is different than the second electrical resistance.

21. A pressure transducer, including:

(A) a pressure sensor;

(C) a heated shell disposed around the sensor, the shell including a first heating element and a second heating element, the first heating element being characterized by a first electrical resistance, the second heating element being characterized by a second electrical resistance, the first electrical resistance being different than the second electrical resistance.

22. A pressure transducer, including:

(A) a pressure sensor;

(C) a heated shell disposed around the sensor, the shell including a first heating element and a second heating element, the first heating element being characterized by a first electrical resistance, the second heating element being characterized by a second electrical resistance;

(D) one or more electronic components for applying an electrical signal to the heater, the heater generating heat in response to the electrical signal;

(E) a switching element for selectively connecting (1) the first and second heating elements in series with the electronic components and (2) the first heating element in series with the electric components, the second heating element in series with the electronic components, or the first and second heating elements in parallel with the electronic components.

23. A transducer according to claim 22, wherein the first electrical resistance is equal to the second electrical resistance.

24. A transducer according to claim 22, wherein the first electrical resistance is different than the second electrical resistance.